

2014 Sustainability Progress Report

Building a better tomorrow

Sound Transit provides affordable, environmentally friendly public transit that connects Central Puget Sound residents to where they live, work and play. The agency's expanding network of buses and trains supports the region's communities, environment and local economy.



Sustainability at Sound Transit

Improving regional quality of life

Sound Transit's mission to build, operate and expand the regional transit system is essential to the Central Puget Sound's sustainable future. The current transit system and Sound Transit 2 (ST2) expansion projects enable more people to travel affordably and reliably on environmentally-friendly buses and trains throughout the region's growing communities.

What does sustainability mean to Sound Transit?

Sustainability is about making long-term investments and choices that keep the region's environment, communities and economy healthy. For Sound Transit, sustainability is about fulfilling the agency's mission as a transit provider, as well as how that mission is accomplished.

Sound Transit organizes its efforts around the following principles:

1. Help **people** move freely and affordably by providing regional transit.
2. Promote stewardship to conserve the **planet's** natural environment.
3. Support local economic **prosperity** by enabling residents and businesses to save time and money.

Sound Transit implements sustainability through a robust Environmental and Sustainability Management System (ESMS). This system holds the agency accountable for controlling potential environmental impacts, achieving annual ESMS targets and demonstrating continual improvement in performance. Since 2007, the agency has been among a select number of transit agencies nationwide to achieve international ISO 14001 certification of its ESMS.



Key accomplishments

In 2014, Sound Transit achieved a number of important sustainability accomplishments that leverage social, environmental and financial benefits for the region's future. The agency:

- Helped to reduce the region's environmental footprint by increasing transit ridership and efficiency. Sound Transit provided nearly 33 million rides and used fewer natural resources to move each passenger.
- Maintained its clean environmental record - no permit violations across construction projects - for a third straight year!
- Integrated sustainable infrastructure and design principles into East Link and Lynnwood Link extensions.
- Incorporated sustainability principles into the agency's Long-Range Plan, which sets the stage for further transit expansion.
- Adopted two new agency policies to promote green purchasing and lifecycle costing.



Transit is sustainable

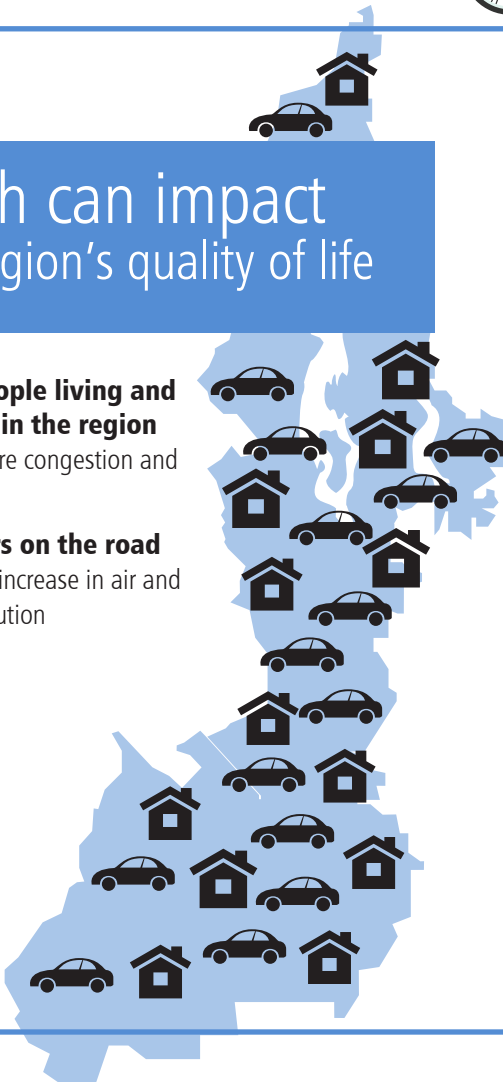
Population growth can challenge regional sustainability

- The region expects to gain **one million + new residents by 2040**
- To grow sustainably, development decisions will need to consider how to **retain a high quality of life and protect the environment**



Growth can impact the region's quality of life

- **More people living and working in the region** means more congestion and traffic
- **More cars on the road** means an increase in air and water pollution

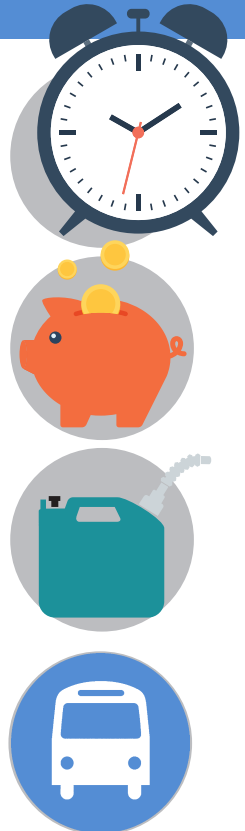


Sound Transit is part of the solution

Sound Transit promotes sustainability by developing the regional transit system and fostering smart growth.

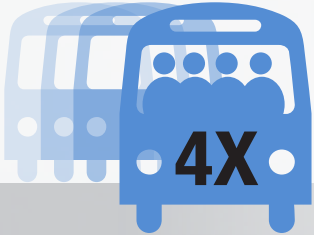
Riding transit

- Saves time
- Saves money
- Saves fuel
- Reduces traffic



Year in review

2014 by the numbers



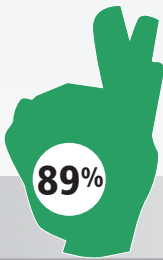
PEOPLE

Ride: Provide safe, affordable and reliable transportation choices

- Increased total boardings across the region by eight percent over 2013, providing nearly 33 million rides.
- Grew ridership at rates more than four times the national average.
- Carried riders an average of 13 miles – more than double most transit trips nationwide.

Live: Support healthy, diverse, transit-oriented communities.

- Initiated a new Transit-Oriented Development (TOD) project near Othello Station to provide 108 units of affordable housing.
- Advanced TOD projects near four Link light rail stations; evaluating eight more sites for near-term TOD projects.



Advocate: Increase community support for transit investments and services.

- Maintained a high rate of customer satisfaction with riders: 89 percent rated service at a B grade or higher.
- Engaged the public through 24 open houses regarding designs for existing and new projects.
- Received more than 24,000 survey and public comments on the Long-Range Plan. In a separate survey, 70 percent of voters indicated they support a regional transit package.

PLANET

Save energy: Reduce energy use, greenhouse gas emissions and air pollution.

- Improved the region's energy and greenhouse gas (GHG) emissions footprint. For every ton of GHG emissions produced by the agency, 2.2 times that amount was avoided or displaced regionally.
- Achieved reductions in energy use and GHG emissions per boarding by over three percent and four percent, respectively. Growth in ridership outpaced increased energy use.
- Started planning four solar power projects for Angle Lake and East Link light rail stations.
- Carried more riders on ST Express buses without increasing fuel consumption.



Use less, buy green: Reduce materials consumption and increase recycling and environmentally-preferable procurement.

- Increased recycling rates by 13 percent and composting rates by 16 percent. The agency now diverts nearly 40 percent of waste from entering landfills.
- Improved recycling and composting rates by over 50 percent at Union Station, the agency's headquarters.
- Reduced the number of pesticides used from 27 to seven.



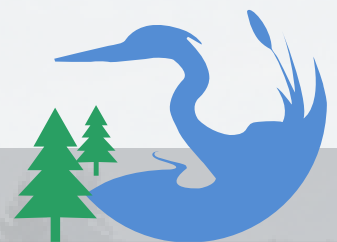
16%



13%

Protect ecosystem: Protect natural habitats and conserve water resources.

- Received zero environmental permit violations across all construction projects for the third year in a row.
- Created or restored three acres of wetland for every acre impacted by Sound Transit's construction projects, exceeding the agency's regulatory environmental commitments.
- Planted over 600 native plants in the agency's wetland mitigation areas.
- Decreased water use at customer and administrative facilities by 11 percent and 28 percent, respectively.



PROSPERITY

Connect: Provide the mobility necessary for strong economic growth by connecting regional urban centers.

- Completed the regional transit Long-Range Plan, the vision for how the transit system should continue to expand after existing voter-approved projects are complete by 2023.
- Provided service with regional partners to downtown Seattle commuters – 45.3 percent of whom use transit.

Streamline: Incorporate sustainability into agency decision making processes.

- Adopted two new policies with implications for sustainable decision making: a Green Procurement and Utilization Policy and a Total Cost of Ownership Policy.
- Incorporated sustainable design and infrastructure elements into new construction projects.

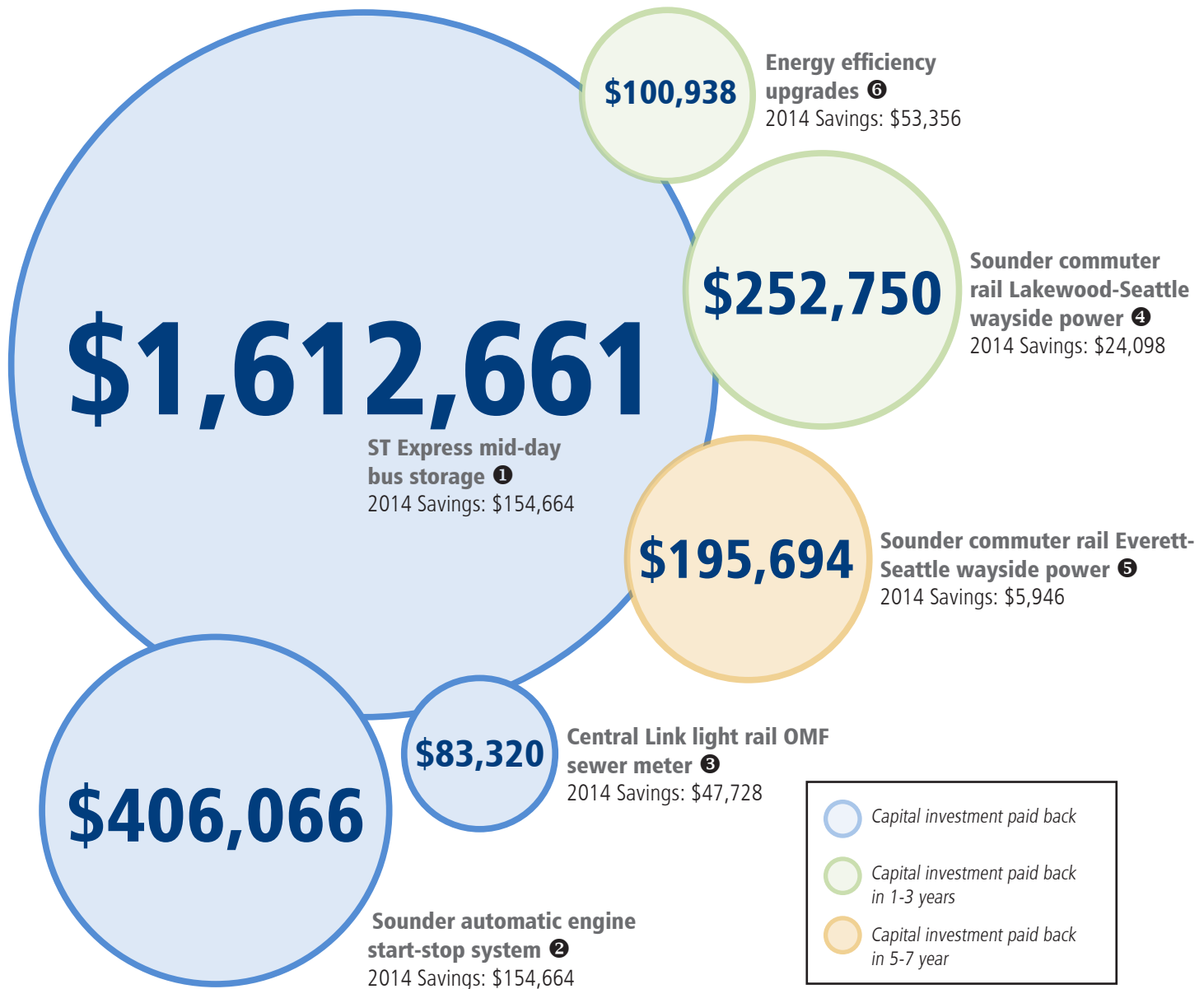


Engage: Enhance staff participation in sustainability initiatives.

- Achieved 89 percent of the agency's annual sustainability targets (17 out of 19).
- Engaged more than 70 agency staff in implementing the Environmental and Sustainability Management System.

Lifetime sustainability savings

These figures show the lifetime savings from select sustainability targets as of 2014. Although some significant program savings are captured here, many projects integrate sustainability in ways that make it difficult to represent direct costs and benefits.



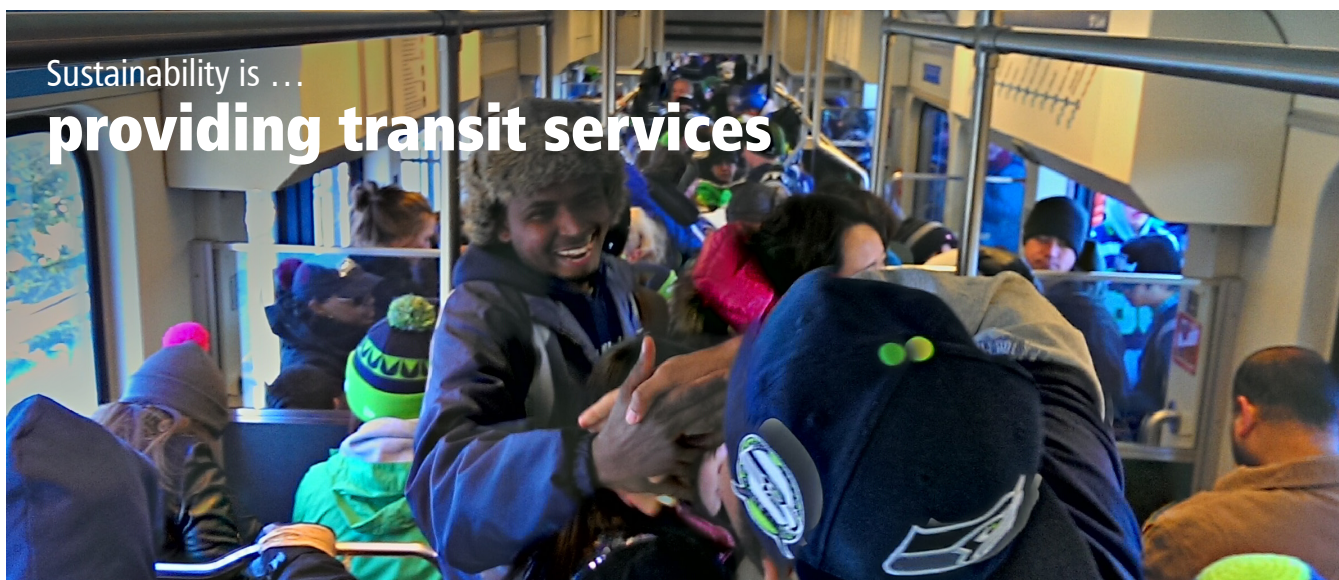
① Since 2008, ST Express mid-day bus storage has allowed Pierce County buses to remain in Seattle until the afternoon commute to avoid driving back and forth empty.

② The Sounder automatic engine start-stop system has worked since 2009 to shut down Sounder engines when not in use to reduce engine idling time by about 34 percent, reducing air pollution.

③ Installing a deduct sewer meter at the Central Link Operations and Maintenance Facility (OMF) in 2012, reduced sewer bills by accounting for the irrigation water that does not enter the wastewater stream.

④ ⑤ Electric wayside power units were installed in 2010/2013 (Lakewood-Seattle) and 2011 (Everett-Seattle) to allow the locomotive's diesel Head Engine Power units to use electricity to heat and power coach cars during layover, reducing diesel and air pollutants.

⑥ Energy efficiency retrofits were implemented at four facilities, saving 10-26 percent of energy in just six months. Upgrades were made to Union Station, Federal Way Transit Center and Kent and Auburn stations.



Seahawks victory parade and transit

2014 brought a lot of excitement to Seattle, including the Seattle Seahawks Super Bowl XLVII win. Sound Transit achieved its busiest day ever when 700,000 Seahawks fans traveled to downtown Seattle on a chilly weekday to celebrate with their team. Sound Transit carried 195,000 passengers - almost double an average day's ridership. To keep everyone moving, the agency operated every active Link light rail train and added as many extra Sounder commuter rail trains as possible throughout the day.

Planning for expanded transit services

At the end of 2014, the Sound Transit Board updated the regional transit Long-Range Plan. This plan provides the vision for how the transit system should grow in the decades after the current voter-approved projects are completed in 2023. The updated plan was shaped by more than 24,000 public comments and survey responses to determine how future expansions should occur.

Implementing affordable transit fares

Sound Transit is making mobility more accessible for low-income families. Working with King County Metro Transit, Kitsap Transit and the Seattle Department of Transportation, Sound Transit helped to create the ORCA Lift program. ORCA Lift offers income-qualified riders the same benefits of an ORCA card, but at a fraction of the cost. Sound Transits is committed to providing a reliable, affordable transit system.

Nearly 33 million rides and counting

Sound Transit set another all-time yearly ridership record in 2014 for its trains and buses. On average, boardings were up eight percent over 2013, with nearly 33 million boardings. The agency's rate of ridership growth was more than four times that of transit ridership nationally, according to the American Public Transportation Association. "These gains mean not only happier and more productive commuters, but fewer cars on our congested roads," said Sound Transit Board Chair and King County Executive Dow Constantine.





Development near Othello Station

Improving access to transit stations

Sound Transit worked with King County Metro to improve how it plans pedestrian and bicycle access to transit stations and stops. Working with 20 local jurisdictions, Sound Transit and Metro developed a model to illustrate how pedestrian and bicycle connections to transit increase bus, light rail and commuter rail use. Sound Transit now uses this model to better plan for access and transit services at all completed, in construction and planned stations.

Planning for affordable housing

Sound Transit is partnering with Mercy Housing Northwest and the Seattle Office of Housing to build the Myrtle Apartments at Othello Station. The project includes 108 affordable apartments for low-income families above 8,000 square feet of ground floor commercial and community space, all just steps from the

Othello Link light rail station in southeast Seattle. Seattle Mayor Ed Murray stated that “this prime site can offer affordable housing to families who could not otherwise afford to live in the city.”

“Undriving” bad commuting habits

Getting an Undriver’s License™ is a fun way to start a public conversation about driving less. Sound Transit has partnered with Undriving™, a community-generated effort to encourage people to reduce car use. The agency has deployed an Undriver’s licensing station at fairs and festivals within its three-county service area. Station visitors can design an alternative commuting plan with Sound Transit staff and receive an Undriver’s License™ to document their car-less commitment for commuting and every day living.

University of Washington Station





Sustainability is ... **greening design and construction**

Restoring wetlands in Northeast Seattle

Zero permit violations, again!

Sound Transit continues its exemplary environmental compliance record, with no construction site violations for its 10 stormwater permits and six wastewater permits. Additionally, the cities of Edmonds and Tacoma conducted stormwater inspections in 2014 with no findings.

Restoring urban wetlands

Sound Transit is committed to mitigating environmental impacts from its construction projects. For Northgate Link Extension, Sound Transit partnered with Seattle Public Utilities and the City of Seattle Parks and Recreation department to create 12,650 square feet of new wetland within the restored floodplain of Thornton Creek in Northeast Seattle. The Knickerbocker restoration project transformed an urban residential site into a restored stream and habitat corridor with a diverse community of native plants. The site will also be used for public education.

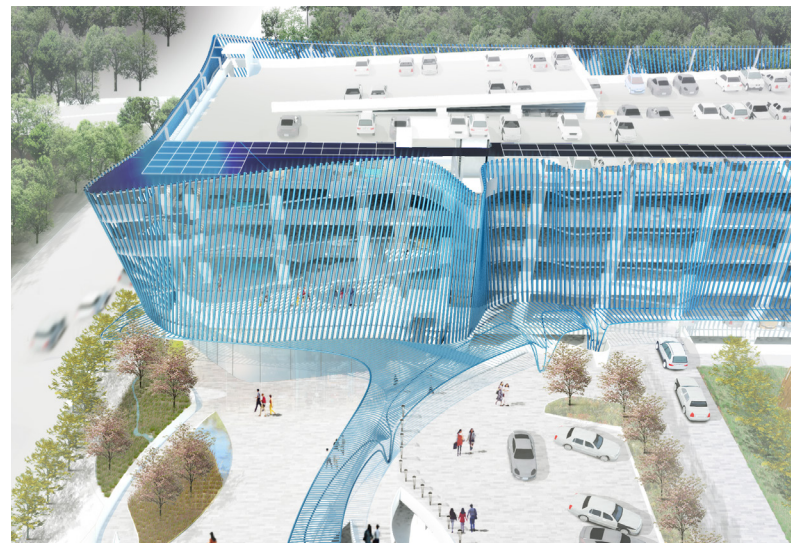
Greening Angle Lake Station garage

Angle Lake Station will be Sound Transit's first LEED Silver certified facility. But it's not the only part of the project designed with sustainability in mind. The station's garage is being constructed to accommodate commercial space at the plaza level. Additional features include a significant solar panel installation that creates a covered walkway along the upper parking deck, motion sensor controlled LED lighting, electric vehicle charging stations and existing mature trees to provide shade and screening for the facility. The project is using concrete that incorporates recycled material to reduce high carbon footprint cement.

Angle Lake Station garage

Designing and planning, sustainably

Sustainable design features have been integrated closely into the design processes for both East Link and Lynnwood Link light rail extensions. With East Link, a detailed sustainability analysis was performed for each station during final design. This resulted in the inclusion of two solar power projects, as well as rainwater harvesting and permeable pavement. A similar evaluation was conducted for Lynnwood Link at an even earlier design stage called preliminary engineering. In addition to evaluating the potential for using solar power, designers assessed innovative stormwater management approaches. The agency will continue these planning assessments to ensure that sustainability features are integrated into the design and budgeting of projects as early as possible. Many of these sustainability features are cost-effective investments that save both natural resources and utility costs.





SODO Station

New policies promote sustainable choices

In 2014, Sound Transit adopted two new policies that ask staff to look holistically at the costs for products and services. The Green Procurement and Utilization Policy encourages staff to procure environmentally preferable products and services – from light bulbs to construction practices. More broadly, the Total Cost of Ownership Policy asks staff to look beyond the initial purchase price of goods and services to ensure that operating and maintenance and other direct cost considerations are part of a project's financial analysis. To facilitate staff implementation, the agency is working to develop detailed procedures and assessment tools for both of these policies.

City of Seattle Commute Trip Reduction – Silver Champion

Sound Transit encourages its own employees to commute as sustainably as possible. The agency was recently granted silver level recognition from the City of Seattle's Commute Trip

Reduction Champions Awards. Sound Transit was awarded for its commute trip reduction programming and engagement, as well as for its rate of employees who commute by transit, biking or walking. Sixty-nine percent of Sound Transit employees take public transit to work!

Healthy solutions for staff

Sound Transit offers a robust employee wellness program that is specifically tailored to staff needs. The agency was recognized as one of only three platinum level "Fit Friendly Workplaces" in the region by the American Heart Association. Sound Transit offers a variety of programs and activities throughout the year. In 2014 almost 50 percent of staff participated in the annual fitness challenge, over 100 employees participated in Bike to Work Month and the agency offered special classes on green cleaning and healthy eating.

Continual Improvement

Although the agency has continually improved sustainability performance, there is always more that can be done to build on existing accomplishments. In the next year, the agency will focus on the following efforts:

- Renew attention to conserving resources in the existing transit system. Targeted water, energy and fuel efficiency projects have resulted in significant savings. However, improving efficiency across the board will require a deepening of conservation efforts.
- Ensure that sufficient funding for sustainable design and infrastructure is included in ST2 project budgets and the ST3 System Plan. Adequate funding safeguards the agency's ability to meet its sustainable design and infrastructure goals.
- Accelerate development of procedures for new agency Green Procurement and Utilization and Total Cost of Ownership policies. Providing staff with tools and resources will aid implementation.

Sound Transit **Year in Review**

2014 Sustainability Targets



Connect

- ✓ Examine how to include sustainability in System Plan cost estimation
- ✓ Begin evaluation of sustainability features in Lynnwood Link Preliminary Engineering
- ✓ Integrate climate adaptation into environmental review for Long-Range and System Plans
- ✓ Document how Sound Transit projects benefit regional and state sustainability goals in Long-Range Plan

Engage

- ✓ Integrate Environmental and Sustainability Management System (ESMS) achievements into performance evaluations
- ✓ Increase design and construction staff participation in technical sustainability trainings

Protect Ecosystems

- ✓ Update facility Stormwater Management Plan
- ✓ Formalize facility wastewater preventive maintenance program

Save Energy

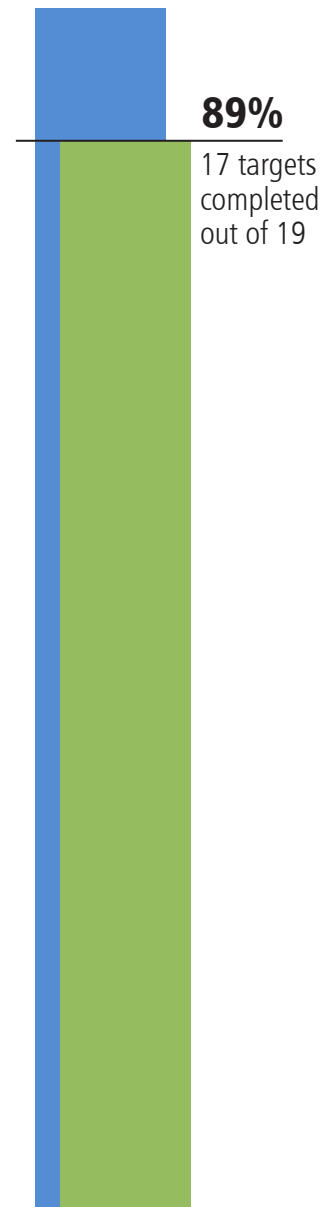
- ☐ Conduct ST Express eco-driving pilot program
- ✓ Implement air quality improvement specifications for applicable construction projects
- ☐ Develop renewable energy strategy for new and existing facilities
- ✓ Research wayside energy storage potential for East Link light rail

Streamline

- ✓ Update Sound Transit Sustainability Plan*
- ✓ Determine agency approach to climate adaptation
- ✓ Develop Total Cost of Ownership Policy
- ✓ Implement sustainability lessons learned from East Link and Angle Lake Station
- ✓ Apply sustainability criteria to annual budgeting process

Use Less, Buy Green

- ✓ Develop green procurement procedure, staff tools and training
- ✓ Establish next steps for using greener concrete mixes



** Also 2014 Agency Milestone
Outstanding targets will be completed in 2015.*

Ongoing Opportunities

2015 Sustainability Targets

Make informed decisions that consider environmental and social impacts

- Integrate sustainability into project and procurement reporting
- Develop and propose a decision path for including optional sustainable strategies into capital projects

Advance Sustainability in Early Planning and Design

- Ensure that system plan project cost estimates address sustainable design and green infrastructure, system access and TOD readiness
- Evaluate optional sustainability approaches for inclusion in final design
- Prioritize pedestrian, bicycle and transit access in draft System Plan language
- Customize sustainability design criteria for preliminary engineering

Increase system resilience to climate change and extreme weather

- Finalize and adopt an agency Climate Adaptation Strategy
- Integrate climate adaptation approaches into project development
- Evaluate design criteria to address projected climate change impacts

Reduce Construction Pollution

- Survey small contractors, disadvantaged business enterprises and rental companies about sustainability best management practices
- Implement three pilot projects to test sustainability best management practices for construction

Increase revenue fleet fuel efficiency and reduce vehicle pollution

- Initiate ST Express Fuel Efficiency Strategy Update

Procure and use green products and services

- Finalize Green Procurement and Utilization procedures and provide agency training
- Revise guide specifications to reflect greener concrete mixes where possible

Foster a staff culture of sustainability

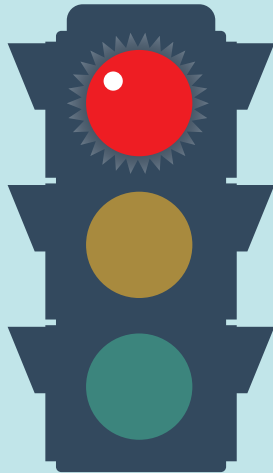
- Develop staff outreach to improve recycling and composting rates



Transit benefits the community

Saves time

The average Seattle driver **wastes 48 hours a year in traffic**



SOURCE: Texas Transportation Institute (2012)

Saves money

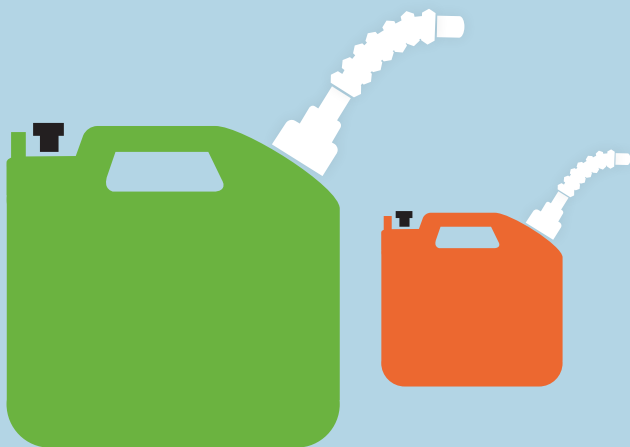
A Seattle area driver can **save nearly \$12,000 a year** by switching from driving to transit



SOURCE: American Public Transportation Association (2013–2014)

Saves fuel

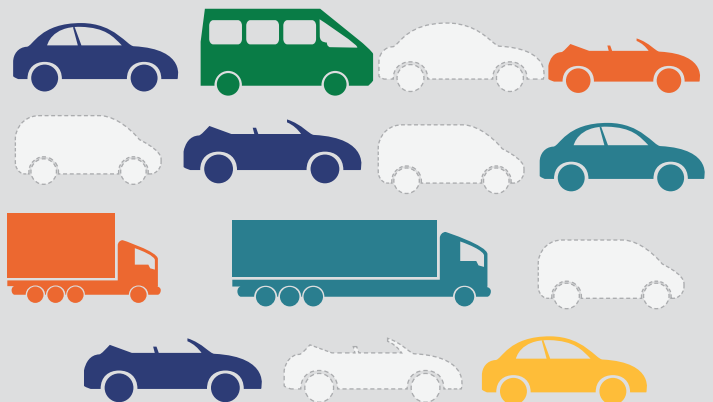
Sound Transit riders **save 15.5 million gallons of gas** a year



SOURCE: Sound Transit (2013–2014) and EPA GHG Equivalencies Calculator

Reduces traffic

Sound Transit reduces fuel use equal to **taking 29,000 cars off the road** a year



SOURCE: Sound Transit (2013–2014) and EPA GHG Equivalencies Calculator



For more information contact esms@soundtransit.org
or visit soundtransit.org/environmental

April 2015